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1       None of the prior art references, taken alone or in combination,  
2       teach or suggest providing at least one of fluorine and chlorine within  
3       a gate oxide layer, and forming a gate proximate the gate oxide layer  
4       *after the providing* as claimed.

5       Referring initially to the Pan '525 patent, such clearly discloses  
6       with reference to Figs. 1C-1E the formation of the gate prior to  
7       fluorination of layer 18. Referring to the Pan '435 patent, such clearly  
8       discloses in Figs. 1A-1B the formation of gate electrode 16 and  
9       subsequent implantation of fluorine ions in Fig. 1B following the  
10      formation of gate electrode 16. Referring to Fig. 8 and Fig. 9 of the  
11      Witek patent, such fails to teach or suggest the formation of a gate  
12      oxide layer over a semiconductive substrate in combination with forming  
13      a gate proximate the gate oxide layer after the providing as claimed.

14      Accordingly, the teachings of the Pan '525 patent, the Pan '435  
15      patent and the Witek patent, taken singularly or in combination, fail to  
16      teach or suggest limitations of claim 51. As not one of the cited  
17      references discloses such recited limitations, it is inconceivable that the  
18      references could, singularly or in any combination, suggest such recited  
19      limitation. Claim 51 defines patentable subject matter over the prior  
20      art of record.

21      Claims 52-54 and claims 76-77 depend from independent claim 51  
22      and therefore are in condition for allowance for the reasons discussed  
23      above with respect to claim 51 as well as for their own respective  
24      features which are neither shown nor suggested by the cited art.

1 Referring to independent claim 55, a method of forming a  
2 transistor gate is defined comprising, in part, forming a gate and a gate  
3 oxide layer in overlapping relation, the gate oxide layer having a center  
4 and outwardly exposed opposing edges laterally aligned with the edges  
5 of the gate; and concentrating at least one of chlorine or fluorine in  
6 the gate oxide layer having the outwardly exposed opposing edges and  
7 within the overlap. The subject matter of independent claim 55 is not  
8 shown or suggested in the prior art of record.

9 None of the prior art references, taken alone or in combination,  
10 teach or suggest forming a gate oxide layer having a center and  
11 outwardly exposed opposing edges laterally aligned with the edges of the  
12 gate, and concentrating at least one of chlorine or fluorine in the gate  
13 oxide layer *having the outwardly exposed opposing edges* as claimed.

14 Referring initially to the Pan '525 patent, the structure of  
15 Figs. 1A-1J and Figs. 2-5 fails to teach or suggest the gate oxide having  
16 a center and outwardly exposed opposing edges laterally aligned with the  
17 edges of the gate and concentrating at least one of chlorine or fluorine  
18 in the gate oxide layer having the outwardly exposed opposing edges.  
19 As described in col. 5, lines 6-8, of the Pan '525 patent, the structure  
20 of Fig. 1C further receives a blanket thin silicon oxide dielectric  
21 layer 18 to provide the structure of Fig. 1D. Fluorination thereafter  
22 occurs with respect to Fig. 1E. Accordingly, the Pan '525 patent fails  
23 to teach or suggest concentrating at least one of chlorine or fluorine in  
24

1 the gate oxide layer having the outwardly exposed opposing edges as  
2 claimed.

3 Further, the Pan '435 patent fails to teach or suggest the  
4 formation of the gate oxide layer having a center and outwardly exposed  
5 opposing edges laterally aligned with the edges of the gate. Referring  
6 to Figs. 1A-1E of the Pan '435 patent, all such disclosed structures  
7 additionally fail to teach or suggest concentrating at least one of  
8 chlorine or fluorine in the gate oxide layer having the outwardly exposed  
9 opposing edges as claimed.

10 In addition, the disclosed structures of the Witek patent fail to  
11 teach or suggest the formation of the gate and the gate oxide layer as  
12 claimed having outwardly exposed opposing edges laterally aligned with  
13 the edges of the gate and concentrating at least one of chlorine or  
14 fluorine in the gate oxide layer having the outwardly exposed opposing  
15 edges.

16 Accordingly, the teachings of the Pan '525 patent, the Pan '435  
17 patent and the Witek patent, taken alone or in combination, fail to  
18 teach or suggest positively-defined limitations of independent claim 55.  
19 Accordingly, claim 55 is patentable over the prior art of record.

20 Claims 56-61 depend from independent claim 55 and therefore are  
21 in condition for allowance for the reasons discussed above with respect  
22 to claim 55 as well as for their own respective features which are  
23 neither shown nor suggested by the cited art.  
24

1 With regards to the double patenting rejection, application serial  
2 number 08/993,663 has been abandoned by Applicants and the claims  
3 thereof are currently being prosecuted in application serial  
4 number 09/332,255. Accordingly, it is believed that the obviousness-type  
5 double patenting rejection is improper in view of the abandonment of  
6 application serial number 08/993,663.

7 Applicants have not yet received Forms PTO-1449 submitted to the  
8 Patent Office with Information Disclosure Statements on April 14, 1999,  
9 December 13, 1999 and January 27, 2000 with the initials of the  
10 Examiner indicating full consideration of the references thereon.  
11 Applicants respectfully request full consideration of such references, the  
12 initialling of all references on the respective Forms PTO-1449, and the  
13 forwarding of such initialled Forms PTO-1449 to the undersigned.

14 Applicants respectfully request allowance of all pending claims.

15 The Examiner is requested to phone the undersigned if the  
16 Examiner believes such would facilitate prosecution of the present  
17 application. The undersigned is available for telephone consultation at  
18 any time during normal business hours (Pacific Time Zone).

19  
20 Respectfully submitted,

21  
22 Dated: 2/9/00

By: 

James D. Shaurette  
Reg. No. 39,833